

- 24 -

Claims:-

1. A waste management system comprising providing householders with waste collection units and a collection vehicle to collect waste from householders characterised in that said waste collection units have predetermined collection containers for predetermined categories of waste whereby the householder performs a preliminary sorting of his waste into said predetermined categories, said household collection vehicle has collection containers for at least the waste categories sorted by the householder, providing a way-station at which categorised waste from the collection vehicle can be temporarily stored, providing a way-station collection vehicle having the facility to transport said categorised waste from a plurality of way-stations, and providing a recycling depot at which categorised waste from said way-station collection vehicle can be distributed for recycling or disposal.
2. A waste management system as claimed in claim 1 characterised in that the household collection vehicle has storage compartments for more categories of waste than the household collection unit, and the household collection vehicle operator performs a secondary sorting of the material first categorised by the householder.
3. A waste management system as claimed in claim 1 or claim 2 characterised in that the ratio of the sizes of the containers of the household collection unit corresponds to the ratio of the volumes of the different categories of waste which are expected in the overall waste of a household.

- 25 -

4. A waste management system as claimed in claim 2 or claim 3 characterised in that the ratio of the sizes of the various collection compartments of the household collection vehicle is in accordance with the volumes of the individual categories of waste sorted by the combined effort of the householder and the collection vehicle operator.
5. A waste management system as claimed in any one of the preceding claims characterised in that the household collection vehicle is provided with compaction means for reducing the volume of low density waste items such as cans or plastics bottles.
6. A waste management system as claimed in any one of the preceding claims characterised in that the recycling depot incorporates an anaerobic digester or a closed in-vessel composting system for recycling putrescible and organic waste materials.
7. A waste management system as claimed in any one of the preceding claims characterised in that the recycling depot incorporates means for recycling collected materials other than putrescible and organic waste materials.
8. A waste management system as claimed in claim 7 wherein said means includes any one or more of, a glass recycling plant producing reusable glass product from the collected glass waste, a paper mill producing reusable paper product from the collected paper waste, and, a plastics recycling plant producing reusable plastics product from collected plastics waste.

- 26 -

9. A waste management system as claimed in any one of the preceding claims characterised in that the way-station is a covered enclosure.

10. A waste management system as claimed in any one of the preceding claims characterised in that said way-station can accommodate the household collection vehicle for secure overnight storage.

11. A waste management system as claimed in any one of the preceding claims characterised in that said way-station has a power supply for charging batteries of the household collection vehicle.

12. A household waste collection unit characterised by comprising a frame supporting a plurality of moveable waste boxes for designated categories of waste, said boxes being detachable from the frame and having a ratio of sizes one to another which corresponds to the ratio of volumes of said predetermined categories of waste within the overall waste generated by the household.

13. A household waste collection unit as claimed in claim 12 characterised in that each of said boxes is equipped with a detachable lid.

14. A household waste collection unit as claimed in claim 112 or claim 13 characterised in that there are five boxes, consisting of two large boxes of equal volume, a medium sized box of lower volume, and two smaller sized boxes of equal smaller volume than the volume of the medium sized box.

- 27 -

15. A household waste collection unit as claimed in claim 14 characterised in that the two smaller sized boxes are contained within the two large sized boxes respectively.

16. A household waste collection unit as claimed in claim 14 or claim 15 characterised in that one or both small sized boxes is equipped with clip means for holding a biodegradable liner in an open condition in the box.

17. A household collection vehicle (HCV) characterised by incorporating a plurality of containers at least equal in number to the number of separate categories of waste to be collected from a household.

18. A household collection vehicle as claimed in claim 17 characterised in that said containers of said HCV are demountable from the HCV as a unit.

19. A household collection vehicle as claimed in claim 17 or claim 18 characterised in that said HCV includes a compaction arrangement whereby low density waste items such as cans and plastic bottles can be compacted before storage in collection containers of the HCV.

20. A compactor for plastics materials comprising a chamber for receiving plastics materials, ram means for reducing the volume of said chamber to compact materials therein, and characterised by heater means for heating plastics materials to a softening temperature prior to operation of said ram means.

21. A compactor as claimed in claim 20 characterised that said softening temperature is chosen in relation to the probable types of plastics material in

- 28 -

the waste to be processed, such that the materials can be compacted but are not melted and so remain separable as individual items after compacting.

22. A compactor for metal cans comprising a chamber for receiving cans, ram means for reducing the volume of said chamber to compact cans therein, and characterised by said ram means reducing the chamber volume to about one fifth of its rest volume when compacting.

23. A waste management system as claimed in any one of claims 1 to 11 utilising a collection unit as claimed in any one of claims 12 to 16 and a household collection vehicle as claimed in any one of claims 17 to 19.